UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,576	01/27/2004	David Maxwell Cannon	SJO920030087US1	3882

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/766,576	CANNON ET AL.
	Examiner	Art Unit	
	Helene Rose	2163	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _04 May 2007_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1,2,4-10,14,15,17-23,27,28,30-36,40,41,43-46,50 and 53_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) _dependent claims 3, 11-13, 16, 24-26, 29, 37-39, 42, 47-49; 51-52, and 54_ is/are allowed.

6) ☒ Claim(s) _1-2, 4-10, 14-15, 17-23, 27-28, 30-36, 40-41, 43-46, 50 and 53_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _27 January 2004_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Detailed Action

1. In view of the **Pre-Appeal** Brief, filed on 5/4/2007, **PROSECUTION IS HEREBY REOPEN**. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

2. No claims were added, cancelled, or amended. Therefore, Claims 1-2, 4-10, 14-15, 17-23, 27-28, 30-36, 40-41, 43-46, 50, and 53 are presently pending examination.

3. Claims 3, 11-13, 16, 24-26, 29, 37-39, 42, 47-49, 51-52, and 54 are allowed over prior art.

Claim Rejections – 35 U.S.C – 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under
section 122(b), by another filed in the United States before the invention by the
applicant for patent or (2) a patent granted on an application for patent by
another filed in the United States before the invention by the applicant for
patent, except that an international application filed under the treaty defined in
section 351(a) shall have the effects for purposes of this subsection of an
application filed in the United States only if the international application
designated the United States and was published under Article 21(2) of such
treaty in the English language.

5.   Claims 1-2, 4-10, 14-15, 17-23, 27-28, 30-36, 40-41, 43-46, 50, and 53 are

rejected under 35 U.S.C. 102(e) as being anticipated by Ulrich et al. (US Patent No.

6,754,773/Filing Date: Jan. 29, 2002).

Claims 1, 14, 27, 40 and 50:

Regarding to Independent Claims 1, 14, 27, 40 and 50, discloses a data

management, an article of manufacture for managing data, wherein the article of

manufacture causes operations to be performed, a server for managing data for use

with at least one data storage device and with a plurality of client stations, and an

subsystem for managing data for user with a plurality of client stations, wherein the

following claims (indicated above) are utilizing the same functionalities, wherein

Cannon teaches a data management, an article of manufacture for managing data, a

server for managing data for use with at least one data storage device and with a

plurality of client stations and an subsystem for managing data for user with a

plurality of client stations, each client station having user files, comprising:

a plurality of data storage devices wherein at least one data storage device has a retrieval pool adapted to store user files (see abstract, Cannon);

a digital data processing apparatus coupled to the storage devices, wherein the digital data processing apparatus is programmed to perform a data management method, said method comprising:

receiving multiple user files from at least one client station coupled to a data storage subsystem (column 2, lines 15-16, wherein the subsystem receives multiple user files from a client station, Cannon);

storing at least some of the multiple user files in a retrieval storage pool at a first location in the data storage subsystem (column 12, lines 52-54, wherein the subsystem performs the request archival action by storing the user file in the storage hierarchy 113 and wherein lines 54-56, describe the various techniques that may be employed to determine where files are stored in the storage hierarchy 114/400, and wherein diagram 400 is illustrated in Figure 4, which illustrates multiple levels, Cannon);

creating a managed file comprising an aggregation of at least some of the multiple user files (column 2, lines 17-19, wherein creates a contiguous managed file by aggregating selected received user files in accordance with certain predetermined criteria, Cannon);

Cannon does not teach: applying first predetermined criteria to a user file stored in the retrieval storage pool to designate the user file in the retrieval storage pool as one of a higher priority and a lower priority.

Cannon does not teach: deleting from said retrieval storage pool a user file designated as lower priority; and Cannon does not teach: retaining in said retrieval storage pool a user file designated as higher priority.

On the other hand, Mattis teaches: applying first predetermined criteria to a user file stored in the retrieval storage pool to designate the user file in the retrieval storage pool as one of a higher priority and a lower priority (column 21, lines 39-45, wherein for each of storage device, the cache stores or can access a value indicating the amount of disk space in a pool that is currently storing active data, wherein the cache also stores constant low water mark and high water mark values, Mattis)

Mattis teaches: deleting from said retrieval storage pool a user file designated as lower priority; and retaining in said retrieval storage pool a user file designated as higher priority (Figure 8A, diagrams 802-808, and column 22, lines 14-15 wherein it determines whether a fragment should be deleted and therefore an evaluation is performed and column 22, lines 18-26, respectively, wherein it is desirable for a garbage collector to retain objects that minimize server download time, in which the term "minimize" is equivalent to "low priority", and to minimize server traffic, it is desirable for a garbage collector to retain objects that are large, wherein the phrase "retain object that are too large" is equivalent to "high priority", and wherein a garbage collector by definition is defined to locate data objects that can no longer be used and makes their memory available for reuse, which is interpreted to correspond to a retrieval storage pool, Mattis).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate Mattis teachings into Cannon system. A skilled artisan would have been motivated to combine as suggest by Mattis [Figure 8A, diagrams 802

and 803] for implementing a space efficient storage based on a high and low

importance to optimize the overall performance of the system.

Claims 2, 15, 28, and 41:

Regarding to dependent Claims 2,15,28, and 41, most of the limitations of these

claims have been noted in the rejection to claims 1, 14, 27, and 40. In addition the

combination of Cannon in view of Mattis (as modified) teaches retaining in said

retrieval storage pool a user file designated as higher priority (Figure 8A, diagram 803,

Cannon).

Claims 4, 17, 30 and 43:

Regarding to dependent Claims 4,17,30, and 43, most of the limitations of these

claims have been noted in the rejection to claims 1, 14, 27, and 40. In addition the

combination of Cannon and Mattis (as modified) teaches wherein said retrieval storage

pool is located in a disk storage (columns 7-8, lines 64-67 and lines 1-8, wherein the

storage pool identifies a subset of the storage hierarchy wherein the managed files

resides and wherein each storage pool is a group of storage devices of the storage

hierarchy, wherein for instance each of the DASD's, DASD's, optical disk, tapes, and

tapes may be divided into one or more storage pools, Cannon).

Claims 5,18,31 and 44:

Regarding to dependent Claims 5,18,31 and 44, most of the limitation of these

claims have been noted in the rejection to claims 1, 14, 27, and 40. In addition the

combination of Cannon and Mattis (as modified) teaches wherein said managed file

creating includes copying user files to an aggregation storage pool and designating the

aggregation of user files in the aggregation storage pool as a single file in a database

(column 14, lines 42-54, wherein respectively, Cannon)

Claims 6, 19, 32, and 45:

Regarding to dependent Claims 6,19,32, and 45, most of the limitations of these claims have been noted in the rejection to claims 5, 18, 31, and 44. In addition the combination of Cannon and Mattis (as modified) teaches Ulrich teaches transferring said managed file from said aggregation storage pool to another location within a data hierarchy in the data storage subsystem (column 14, lines 58-61, wherein the subsystem copies the designated files from a source location to a target location in the storage hierarchy, Cannon).

Claims 7, 20, and 33:

Claims to dependent claims 7, 20 and 33, most of the limitations of these claims have been noted in the rejection to claims 5, 18, and 31. In addition the combination of Cannon and Mattis (as modified) teaches wherein said copying includes copying user files from the retrieval storage pool to the aggregation storage pool (column 12, line 41-54, wherein a client system sends one or more user files for storage by the subsystem, wherein the interface receives a user file for archival, wherein the subsystem performs the request archival action by storing the user file in the storage hierarchy, Cannon).

Claims 8, 21, and 34:

Regarding to dependent Claims 8,21 and 34, most of the limitations of these claims have been noted in the rejection to claims 5, 18, and 31. In addition, the combination of Cannon and Mattis (as modified) teaches wherein said aggregation storage pool is located in a tape storage (column 5, lines 49-53, wherein in the context of the storage hierarchy 114/400 term storage pool is used to identify the groups of storage devices with similar performance characteristics, wherein for instance level

404 may be comprised of several storage pools, each pool including one or more DASD's and column 8, lines 2-4, each of the DASD's, optical disk, tape and tapes may be divided into one or more storage pools, Cannon).

Claims 9, 22, and 35:

Regarding to dependent Claims 9,22, and 35, most of the limitations of these claims have been noted in the rejection to claims 6, 19, and 32. In addition the combination of Cannon and Mattis (as modified) teaches wherein said managed file is migrated to a tape storage (columns 7-8, lines 64-67 and lines 1-7, respectively, Cannon).

Claims 10, 23, 36 and 46

Regarding to dependent Claims 10,23, 36, and 46, most of the limitations of these claims have been noted in the rejection to claims 1, 14, 27, and 40. In addition the combination of Cannon and Mattis (as modified) teaches copying received user files to an aggregation storage pool wherein said managed file creating includes creating a managed file comprising a contiguous aggregation of said user files copied to said aggregation storage pool (column 2, lines 17-19; column 2, lines 29-32, and column 12, lines 21-24, respectively, Cannon).

Claim 53:

Regarding Claims 53, **REFER** to claims 1, 14, 27, 40, and 50, wherein the following limitations are substantially the same/or similar and therefore rejected under the same rationale.

Allowable Subject Matter

6.   Dependent Claims 3, 11-13, 16, 24-26, 29, 37-39, 42, 47-49, 51-52, and 54 are

allowed over prior art. For example, prior art does not teach first predetermined

criteria include the status of the user file as one of active and inactive wherein an

active user file currently resides on said client station and is designated a higher

priority user file, and an inactive user file once resided on a client station but has been

subsequently at least one of modified and deleted on said client station, and is

designated a lower priority user file as disclosed in dependent claims, 13,16, 26, 29,

39, 42,49 and 51.

Examiner Response to Applicant Arguments

Applicant's arguments filed on 5/4/2007, with respect to the rejected claims in

view of the cited references have been considered but are moot in view of applicant's

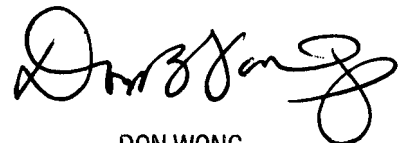amended claims necessitate new ground(s) of rejection.

Point of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene R. Rose whose telephone number is (571) 272-0749. The examiner can normally be reached on 8:00am - 4:30pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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